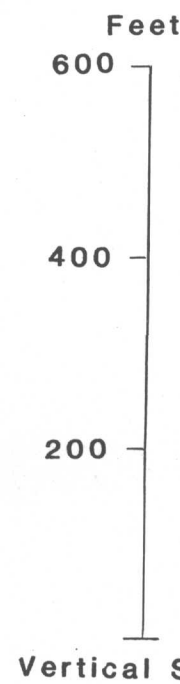
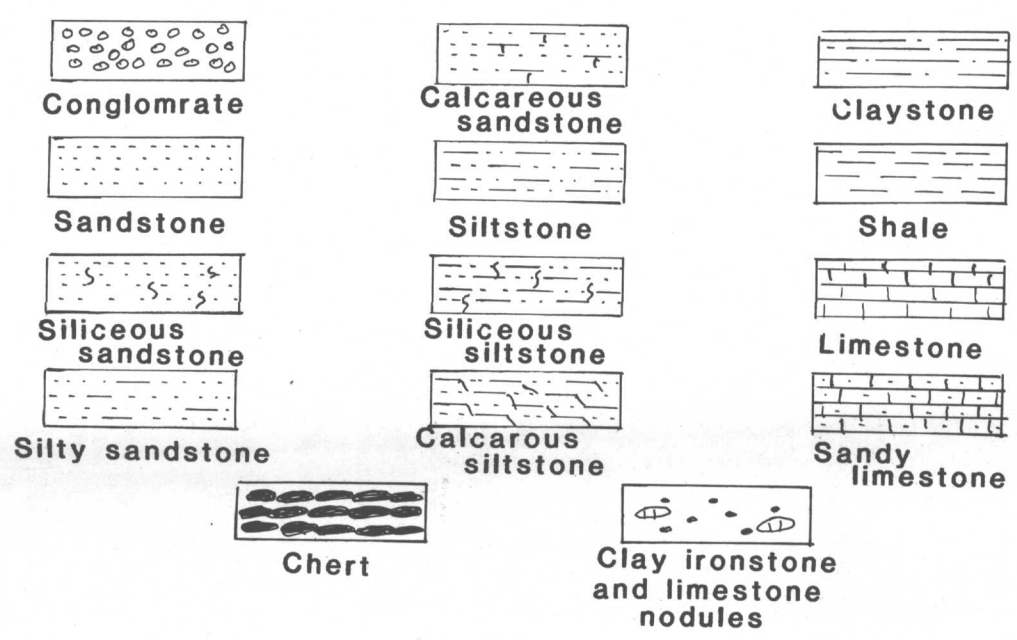


DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



EXPLANATION



| | | | |
|---------------|--------|--------------------|--------------------|
| JURASSIC | Lower | Otuk Formation | Kingak Shale |
| | Upper | | |
| TRIASSIC | Middle | Siksikuk Formation | Shublik Formation |
| | Lower | | |
| PERMIAN | Upper | Siksikuk Formation | Ikiakpaurak Member |
| | Lower | | |
| PENNSYLVANIAN | | | |
| MISSISSIPPIAN | | | |

CORRELATION CHART

Fossil Collections

| | |
|-----|---|
| 2-1 | <i>Zoophycus</i> sp. |
| 2-2 | <i>Martinitia</i> sp., echinoderm and brachiopod fragments |
| 4-1 | <i>Martinitia</i> sp., <i>Spiriferella</i> sp., <i>Linoproductus</i> ? sp., <i>Stropharolites</i> (<i>Euomphalus</i>) <i>alaskensis</i> , horn corals |
| 5-1 | <i>Zoophycus</i> sp. |
| 5-2 | <i>Martinitia</i> sp., <i>Eosianites</i> ? sp., brachiopods and worm burrows |
| 5-3 | <i>Martinitia</i> sp., <i>Spiriferella</i> sp., <i>Anidanthus</i> sp., <i>Asaphichoceras</i> sp., echinoderm and brachiopod fragments |
| 6-1 | <i>Horriconia</i> sp., <i>Kovalevskia</i> sp., <i>Spiriferella</i> sp., <i>Punctospirifer</i> sp., bryozoa and trilobite |
| 6-2 | <i>Timanella</i> ? sp., <i>Neophrictodictya</i> ? sp. |
| 6-3 | Brachiopod fragments (indet.) |
| 6-4 | <i>Zoophycus</i> sp. |
| 7-1 | <i>Martinitia</i> sp., <i>Anidanthus</i> ? sp., echinoderm fragments, worm burrows |
| 8-1 | <i>Martinitia</i> sp. |
| 8-2 | <i>Martinitia</i> sp., <i>Spiriferella</i> sp. |
| 9-1 | <i>Zoophycus</i> sp. |
| 9-2 | <i>Derbyia</i> sp., <i>Yakovlevia</i> sp., <i>Spiriferella</i> sp., <i>Cleiothyridina</i> ? sp. |
| 9-3 | <i>Derbyia</i> sp., <i>Yakovlevia</i> sp., <i>Horriconia</i> sp., <i>Kochiproductus</i> sp., <i>Spiriferella</i> sp. |
| 9-4 | <i>Wasagenocochia</i> sp., <i>Rhynchopora</i> sp., <i>Cleiothyridina</i> sp., <i>Tomopsis</i> ? sp. |
| 9-5 | <i>Spiriferella</i> ? sp. |
| 9-6 | <i>Martinitia</i> sp. |

DISCUSSION

Measured sections of the Sadlerochit Group and Siksikuk(?) Formation were obtained during reconnaissance geologic mapping of the Arctic and Table Mountain quadrangles, Alaska. Sections 6 and 9 were obtained as part of the Denotation Point quadrangle mapping project (Reiser and others, 1980), and section 9 is at the type locality for the Joe Creek Member of the Echiooka Formation, Sadlerochit Group (Detterman, and others, 1975). The remaining sections were obtained during reconnaissance mapping of the Table Mountain and Arctic quadrangles (Brosgé and others, 1976).

Exposures of the Sadlerochit Group in the Arctic and Table Mountain quadrangles represent a distal facies of the sequence present on the north side of the Brooks Range (Detterman, 1971). Dark gray to black siliceous siltstone and shale constitute the main part of the Ivishak Formation at the top of the Sadlerochit. These rocks are included as part of the basal facies of the transgressive Kavik Member of the Ivishak Formation. A thin sequence of the regressive Ledge Sandstone Member of the Ivishak Formation is preserved only in the northeastern part of the Arctic quadrangle, where it represents a distal facies of the southward prograding deltaic system that was mapped in the Denotation Point quadrangle to the north (Reiser and others, 1980; Detterman and others, 1975; Detterman, 1974).

Most of the Sadlerochit Group exposed in the Arctic and Table Mountain quadrangles is a part of the Echiooka Formation, and represents an intertonguing sequence of transgressive Joe Creek Member and regressive Ikiakpaurak Member. The Ikiakpaurak Member consists mainly of fine-grained quartzitic sandstone and dark gray siliceous to micaceous siltstone. The Joe Creek Member is characteristically calcareous with thin to thick light yellow to tan siltstone and shale. A black chert interval is present in the type

section on Joe Creek. This interval increases in thickness to the southwest, and is herein locally considered to be a part of the basal facies characteristic of the Siksikuk Formation. Rocks of the basal Siksikuk facies are generally more brightly colored than the drab olive-gray to tan of the Echiooka Formation. Orange, yellow, pale-green to black siltstone, shale, and chert are characteristic of the Siksikuk Formation, and shale and claystone are generally more abundant than in the Echiooka Formation.

Fossils are locally abundant, but are restricted almost entirely to the open shelf facies limestone and calcareous siltstone of the Joe Creek Member. Brachiopods form the bulk of the fauna and have been identified as *Toweria* (*Sakarian*) (*Ufian*) by J.T. Dutro, Jr. (written commun., 1971, and 1982). Several ammonites in section 5 (5-2 and 5-3) were identified by Rackonitz Gordon, Jr. (written commun., 1982) as ranging from late Pennsylvanian to early Permian. Consequently, some of these rocks may be as old as Pennsylvanian, but the preponderance of evidence suggests a lower Permian age for the Echiooka Formation. A few specimens of the trace fossil *Zoophycus* were found in the Ikiakpaurak Member; they are found commonly in the member on the north side of the Brooks Range. Worm burrows were the only evidence of life forms in the Ivishak Formation in the Arctic and Table Mountain quadrangles. North of the Brooks Range the formation contains a moderately abundant ammonite fauna characteristic of the lower Triassic (Detterman and others, 1975).

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Sections of Sadlerochit Group and Siksikuk(?) Formation from Arctic and Table Mountain Quadrangles, Alaska

By
Robert L. Detterman

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature. Any use of trade names is for descriptive purposes only and does not imply endorsement by the USGS.